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UpTek Solutions Corp.

Phidia-c

Compact Ti: Sapphire Ultrafast Laser Amplifier

FEATURES

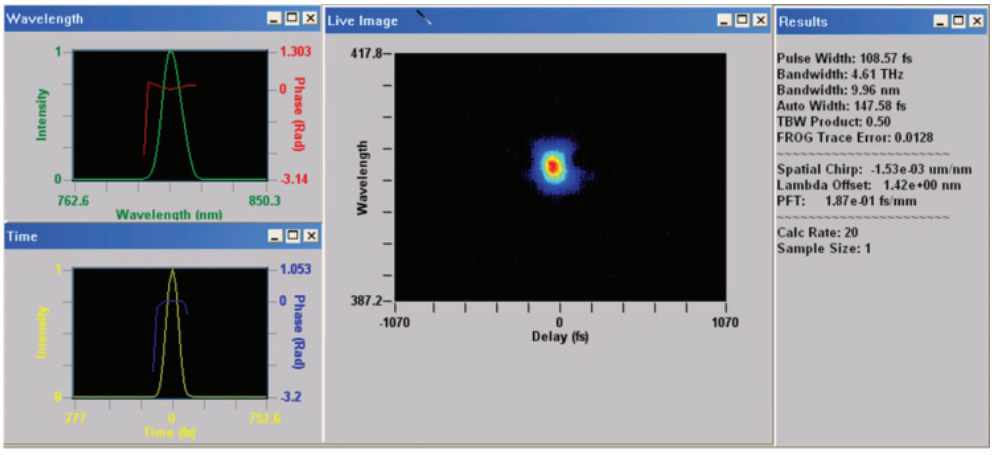
- Most Compact Single-box amplifier in the world
- Industrial grade femto-second Ti:Sapphire laser
- Field-proven pump laser modules
- Excellent Reliability and stability for low maintenance
- Superior beam quality and pointing for more precise measurements
- Series with operating repetition of 1KHz, 10KHz, and 50KHz
- Built-in burst mode
- Optional 2nd and 3rd harmonics generation

APPLICATIONS

- Ultrafast industrial application
- Precision micromachining
- Material processing
- Pump-probe analysis
- Pump OPA
- THz generation

Phidia-c is the most compact one-box Ti: Sapphire ultrafast amplifier on the market. In one single enclosure, the Phidia-C contains an optional all-PM fiber oscillator, a pump laser and amplifiers. It features an industrial-grade, maintenance-free PM-fiber oscillator as a seeder as well as a field-proven Q-switch pump laser resulting in a product with excellent reliability for day-to-day operations.
Phidia-c is capable of operating at variable repetition-rates of 1KHz, 10KHz and 50 KHz. It delivers a pulse duration of <120fs with output power of up to 3.5 W.
This unit is a robust, highly reliable ultrafast amplifier offering the widest range of operable repetition-rate that can satisfy any specification. It is an ideal ultrafast tool for industrial application as well as scientific research, such as material processing, micromachining, ultrafast spectroscopy, etc.

- Phidia-c-1 offers up to 3.5W output, capable of operating up to 3kHz repetition rate
- Phidia-c-10 are pumped by a field-proven Nd:YAG laser delivering up to 2W of output up to 10 kHz operating repetition rate
- Phidia-c-50 is capable of operating at 20-50 kHz with an output power of up to 1.5 W



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Ultrafast Laser and Applications

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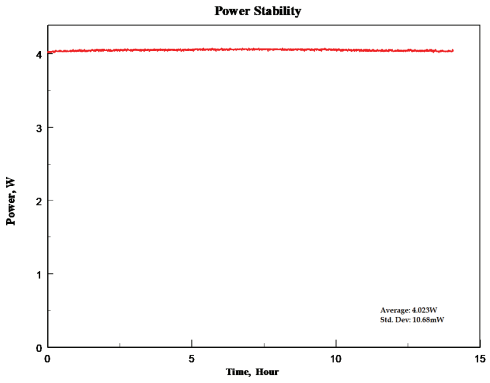
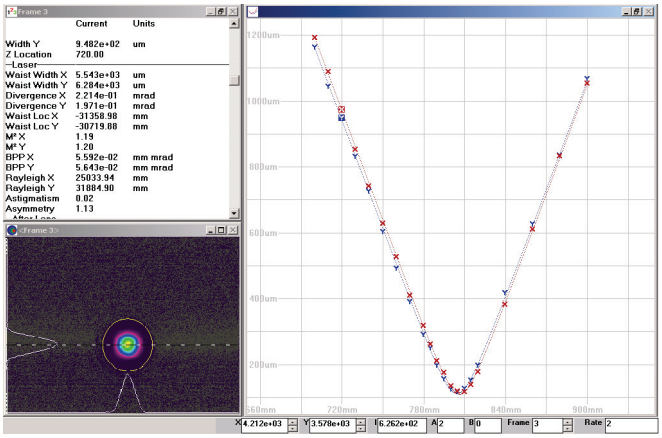
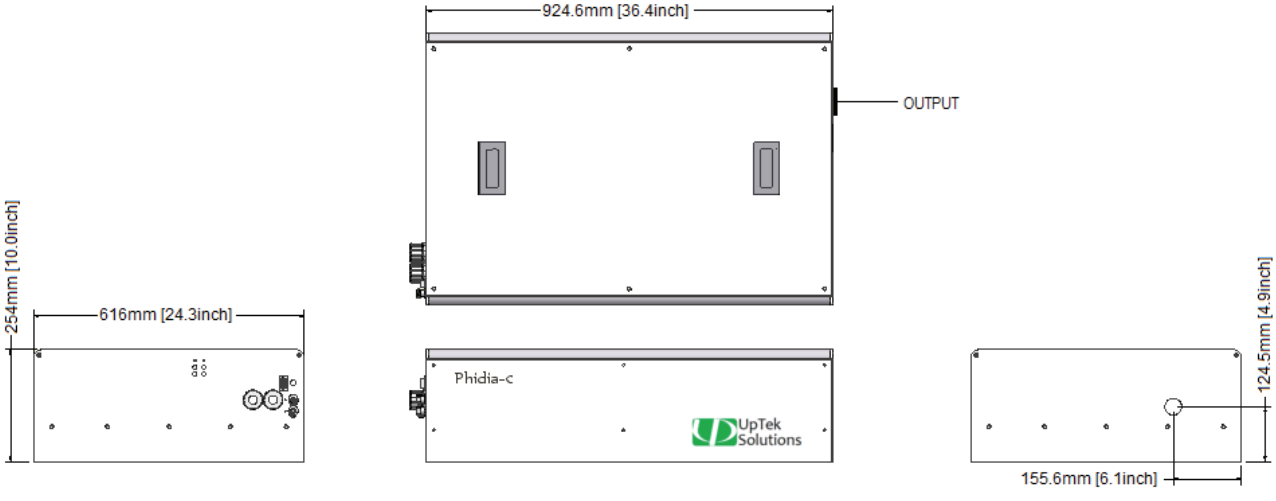
	Phidia-c-1	Phidia-c-10	Phidia-c-50
Pulse Width (FWHM)	< 120 fs	<120 fs	<120fs
Output Power	>3.5 W	>2.0 W	>1.5 W
Repetition Rate	Up to 3 KHz	Up to 10 KHz	Up to 50 KHz
Center Wavelength	790 ± 10 nm	790 ± 10 nm	790 ± 10 nm
Spatial Mode	M^2 <1.3 (TEM_{00})	M^2 <1.3 (TEM_{00})	M^2 <1.4 (TEM_{00})
Energy Stability	<0.5% RMS	<0.75% RMS	<0.75% RMS
Contrast Ratio	>1000:1 pre pulse >150:1 post pulse	>1000:1 pre pulse >150:1 post pulse	>1000:1 pre pulse >100:1 post pulse
Beam Pointing Stability	<10 μrad/ºC	<20 μrad/ºC	<20 μrad/ºC
Beam Size ($1/e^2$)	~6 mm	~5 mm	~ 5 mm
Polarization	Linear, Horizontal	Linear, Horizontal	Linear, Horizontal



Long-term Stability Measurement (<0.3% RMS)



Phidia-c-1 Output Beam Quality Measurement



Phidia-c Series Footprint

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